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Edited by JOHN BARTLETT.

PHOTOGRAPHIC BACKGROUNDS.

THO is responsible for the outrages upon common sense and artistic taste thrust upon the market as photographic backgrounds?

Is it the background maker or the photographer? or are both to blame? Whoever may be responsible, it is the result of ignorance as to the true relation of the background to the figure in a portrait.

That it is not altogether the fault of the background makers, I can testify by relating a little incident which happened to me at the Cincinnati Convention.

I was then new to this country, and was acting as special correspondent to the British Journal of Photography, and in the prosecution of that duty was pushing myself into everything that came along, and in due course I got in among the background exhibits. There were exterior grounds and interior grounds by the hundred, stumps of trees and all the usual properties which are considered necessary for a photographic studio. There were scores of fine pictures, well painted too, artistic in design and execution, but very few backgrounds.

I was being shown very courteously by one of the best known background painters through a very fine lot of these grounds, and told him frankly that out of the whole number he had shown me there was but one background, pointing it out and giving it the praise it deserved for its artistic treatment as a background. I shall not forget his quizzical glance when he informed me that he had received fewer orders for that particular ground than for any other he exhibited, but at the same time he agreed with me that for the purpose that background was the best design he had painted, but, he added, photographers will not buy them. They must have a background that is a pretty picture in itself, apart from its uses as a background.

What, then, are the uses of a background. I have been asked, if it is not to surround the figure with something artistic and pretty?

The use of a background, as understood by artists in painting a portrait, is to give proper value to the principal object in the picture, which in a portrait is of course the head, and anything that will divide the attention, much less attract it from the face, is emphatically wrong.

It naturally follows that the fewer the objects depicted upon the background, the less likely is the attention to be diverted from the point of interest—the face.

I think I hear some smart man who goes in for loud backgrounds and accessories, say, This is one of those old-fashioned cranks who believe in plain backgrounds: that is much too old a chestnut.

To such a one I have nothing to say: he doubtless supplies a demand, and therefore as a merchant is filling his right place. But to the man who loves his profession, who wishes to know what to do and what to avoid to make his portrait partake more of the artistic than the mechanical, I am glad to share the knowledge acquired by over twenty-five years of study as an artist in one of the best art schools, and under one of the best masters in Europe.

First, then, as to the value of a background in a portrait. A very easy and profitable plan to adopt is to cut out a half length or three-quarters length figure from a good portrait photograph, and try the experiment of putting it down upon different tints of mounting board, from pure white to the darkest gray you can procure.

If your portrait has been printed a medium depth, and you place it upon white board, the face will appear quite dark against it, and as you go from light to dark you will notice that the face gets lighter and lighter till, if your backing is very dark, the face will look quite light in comparison.

By this experiment you will have learned one important part, viz.: that the background is a very important factor in the finished result. If your background is light, your lighting for the figure must be often, and to some extent, flatter than with a medium or dark background. With a medium dark or dark background, your lighting must be more bold, and you can afford to go in for a more extended scale of tones upon both flesh and draperies.

But you will have noticed one thing more, and that is that every tint put behind your figure formed an indifferent background simply because it was a flat tint all over. This should teach you that the flat background, whether cloth or painted, is not the right one to use, unless something is done to cut off the light which falls upon it, in such a way as to graduate it so that it not only supports the head but also gives breadth by continuing the light which falls upon the figure upon the background.

This can be done by placing the figure at least five feet from the background, and with screen upon both top and sides of the background, shade downward from the top and on the lighted side to almost one-third across. This will give somewhat the effect aimed at by artists in painting a portrait, viz.: that the lighted side of face and figure is emphasized against the shaded side of the background, while the shaded side of the figure is relieved against the lighted part of it. If the shadow cast by the figure falls upon the lower part of the lighted side the artistic requirement of a background as a support to the figure is completed.

This is the plain and simple rule which should govern background painters in making photographic backgrounds. Whatever the design of the background, either exterior or interior, this relation of light and shade should exist, and the more simple the design and the more indefinite the details, the better background it will be.

It is painful to every artistic eye to look at portraits as they are sent out by ninety-nine out of every hundred photographers, where there are a whole suite of rooms behind the figure, every piece of furniture painted in them, every florid ornament, even the pattern of the impossible wall paper, everything there calling for more attention than the figure, which should be the centre of attraction, and which artistically should have a background which should lead up to and be in every part subordinate to it.

G. HANMER CROUGHTON.

Rochester, N. Y.

COPVING

WHILE the subject of copying by means of photography might be considered uninteresting by the amateur, it would probably be looked upon from quite another standpoint by the professional man. That no inconsiderable amount of money is being constantly made in this manner every experienced operator knows, and, therefore, in offering our readers a few thoughts upon the subject of copying in general, we feel that we need hardly apologize for the theme which has been well nigh worn threadbare years ago in the different journals and books devoted to our art.

Copying, as a whole, might conveniently be divided into the photographing of monochrome and the photographing of color. Now the copying of an engraving, etching or mezzotint, by means of the camera, is a very simple and easy affair, provided that the original be quite flat, and so suspended before the camera that its plane is absolutely parallel with that of the ground glass. Easy as this might at first seem, it will not be amiss for us to ask our readers to remember that much valuable time will be wasted in getting the original into this proper position before the lens, unless a special arrangement be at hand to facilitate the operation. A well-seasoned board large enough to hold the drawing or engraving, and leave a little space at the edges to spare, is fitted upright exactly at right angles to the end of another long board, on which the camera is set. The latter can then be pushed forwards and backwards. according to the size of image desired. It would be quite worth while to arrange the board which is to hold the engraving so as to have a double-sliding movement just like the lens-panel in a view camera box. In this way the exact centering of the original could be easily and quickly effected. If the originals were of large size, so that an apparatus of the kind would be too bulky, a good plan would be to find a suitable quiet place out-of-doors where the original could be suspended on a wall facing the south, and then to arrange a firm tripod or table at the distance required, and fasten it down to the spot. In this case the question whether to use the full sun or not would depend upon the texture of the original. A sheet could be hung over the original if the full sunlight caused an unpleasing granular appearance in the negative.

Let us also say that the brilliancy and good quality of a copy, especially with such an arrangement out of doors, will suffer if there are any false reflections or glare of light entering the lens. It would not be a loss of time, under the circumstances, to arrange a large diaphragm midway in the camera, or to slip a blackened cardboard tube over the lens, allowing it to project forwards until it began to cut off the corners of the circle of light on the ground glass. If a small etching were to be hung on a dead white wall, so that the lens had to face the latter, the glare would make it difficult to keep the blacks of the negative clean and free from deposit, unless some such plan were adopted.

So much then for the copying of drawings and engravings which are flat and in single sheets. But how would it be in the case of the same in bound books? Many a time the photographer will be called on to copy a picture in a book, and it will sometimes happen that the whole trouble will be to get the page of the book flat enough to work by. This is really a difficult matter, and if the edge of the print stands close in towards the hinge, it may be impossible to do any justice to the

subject without cutting the illustration out. The best plan that we have found for prints in refractory volumes has been as follows: Having the right-angle copying board, previously spoken of, set in proper position, open the volume at a right-angle, and resting the portion containing the print upright against the perpendicular part of the board, support the other portion on blocks of wood at the proper height, so that there may be no strain upon that part containing the print. Have some clean white tape ready, and let an assistant pass it around the upright portion at the top and bottom, tying it behind the board firmly, but not pulling it too tight, for this would make the loose leaves bulge out of place. If the page cannot be made flat in this manner, stand a perfectly clean sheet of thick plate glass over it, and supply the place of the tapes (which would be too weak to support the weight of the glass) by two flat bars of wood, with long cords passing through holes in each end, and tie them as before. These will bear upon the top and bottom of the plate glass, and may be tightened or loosened until the pressure upon the page of the book becomes quite uniform.

This is a very practical arrangement for flattening the page of the book, but as the sheet of glass brings with it two surfaces, each of which reflects light, care must be taken that none of these reflections strikes the lens. A black cloth with a hole in its middle, just large enough to allow the lens to work, should be thrown over the front of the camera, and a similar black cloth be laid flat upon the horizontal part of the book. Of course there should be nothing white around or behind the camera. By observing such points as these, it will often be possible to make very good copies from even thick bound volumes. Those of the "brochure" variety will not be as troublesome.

A point of no little importance in copying these objects in one color is to see that the plate is not over-exposed. It must be borne in mind that the development of the plate ought not to be hurried, so that all the density possible may be obtained. But it is plain that this can be done only with a plate which has not been exposed for a sufficiently lengthened time to allow any action in its black or deep-shadow portions. The thing in work of this sort is to keep the shadows clear, and it can be only accomplished by suiting the exposure to the development, not vice versa.

The necessity for having the mechanical appliances in good order when copying is to be done, will be most apparent where maps or plans of large size have to be taken on large plates. In the Ordnance Office at Southampton, in England, negatives are frequently made on plates measuring four feet by three. The wet collodion process is still the favorite for work of this kind.

Successful photographic copying of oil paintings will depend in great measure upon the colors of the original. A skilful painter can often retouch his work with water color so as to produce a proper effect in the photograph, the retouching being removed after the negative is taken. We should always prefer this rather than to attempt the work with orthochromatic plates. Nevertheless experiment with this last new power in photography ought by no means to be neglected. The results obtained by Ives and others on colored work and chromos prove that when the emulsion and screen are suited to the colors, wonders may be done. The drawback to the use of orthochromatic emulsions at present seems to be the necessity of nice adapting of the coloring material and the color screen to the special colors in any given subject. Water color drawings would offer about the same difficulties as oil paintings.

As regards the choice of a lens for copying, little need be said. We can hardly imagine that anyone would copy an architect's plan with a short-focus single lens; and yet the single lens is largely employed in Europe for a varied class of copying work where mathematically perfect images are not required. It is but fair to say, in this connection, that they are always of large size and long focus, thus covering a large enough field to enable the operator to use the central parts of the image only where, of course, there is little or no distortion. Cheapness would be one advantage of the single-lens, and the necessity of keeping the camera well back from the original would be another, for there would be no possible interference with the light. When short-focus, wide-angle doublets are used, it will, at times, require considerable management not to allow the shadow of the corner of the camera to fall on the object to be copied, the camera necessarily standing very close to the original.

ELLERSLIE WALLACE.

RELATIVE TONE IN PHOTOGRAPHY.

WE once visited the studio of a painter of still life. He sat before his easel enthroned, as it were, in the very heart of his kingdom of motley subjects. At his feet lay retainers of portly pots and pompous kettles in apparent consciousness of proximity to his majesty. The floor was strewed with more retiring and obsequious vases and bowls and urns, while here and there mingled with the throng a decayed aristocratic chair, whose shrunken limbs caused it to make respectful inclination towards the seat of power. The walls were covered with objects of every imaginable shape and color, of the heaven above, of the earth beneath, and of the waters under the earth, and doubtless seemed to the painter very good, but to us of an idealistic turn of mind all seemed trivial and unworthy of recognition in art.

We marveled why he took delight in such barren subjects; how he dared prostitute his calling in bodying forth upon his canvas these execrable shapes; but we had not tarried long ere we began to perceive in ourselves a growing pleasure in the beautiful effects of light and shade which his combinations evolved. We lost sight of the realistic obtrusiveness of the things themselves in the perception of the delicacy and depth of the relative tones. The pots and the pans and the kettles were but symbols whose association called forth æsthetic conceptions. Here was the secret of the painter's delight. We could see how each individual object contributed to the harmony of the whole, "each in each by mutual rendering."

The whole effect of light and shade in a photograph, that is, the standing out of one part from another, is dependent upon the proper perception of the relativity of one tone with another. If all objects were either black or white this sense of judgment of tone would be comparatively easy of cultivation, but the variety of shades of color in objects, and the effects produced by reflection and interpretation of colors, demand a close and accurate study of things in relation to one another in order to appreciate harmony of light and shade.

The pre-Raphaelites were so intent upon the importance of rendering individual parts that their eyes were blinded to the true values of a picture. The Chinese and especially the Japanese decorations often delight us with the subtle appreciation of the relativity of tone in color, so that we forget the grotesque and often ridiculous

representation of natural objects. A genuine delight is often to be found in studying the effect produced in the blending of the intricacies of color in a *real* Persian rug.

Rembrandt had a just appreciation of the value of concentration of light and shade, but Velasquez was the great master of values. His pictures in vigor and delicacy excel all others.

The proper rendering of tones really suggests color, so that a photograph or an engraving in black-and-white, if the values are properly rendered atones for loss of color.

Leslie tells us that when Reynolds painted his Dido on the Funeral Pile, he put together billets of wood, covered them in part with the rich objects he has introducing to his painting, and placed his model on it in the attitude and in the dress of the expiring Queen. This, he remarks, arose from no want of imagination in Reynolds, nor with the intention of imitating all the minute details of the thing he put together, but because he knew that a degree of general truth and harmony of light and shade and color might thus be best obtained, and accidental beauties of combination suggested which might not otherwise occur to him.

Reynolds' own remarks on a similar practice by Gainsborough are excellent, and should such contrivances appear to consume time unnecessarily it can only be said that far more time is often lost in endeavoring to guess at effects which such contrivances show us at once.

Wilkie in his earlier practice often made small models of the rooms that formed the scenes of his pictures, with the proper doors and windows, and placed the general forms of his groups and furniture within them, and he had no reason afterwards to regret this as any waste of time.

All of nature's accidental combinations are not equally beautiful. Some delight us more than others, but nature never offends our sense of the beautiful by the discords we see in badly conceived paintings. Nature subdues one color with the reflection of others, or intensifies brilliancy by inter-penetration of light.

Really no object can stand isolated, or rather we have our impressions of things modified by surroundings, and it will be seen that hap-hazard association of objects however beautiful individually, will affect us unpleasantly if they are not brought iogether with a true appreciation of the law of modification by juxtaposition.

It therefore is of great consequence to the painter to imitate the appearance of every object with reference to the things which surround it. It will not do to paint a model in a studio and then add a background landscape painted from nature. Yet this is the common practice of even painters of merit.

Fortunately the photographer is not troubled with the rendering of form; the unerring pencil of light delineates everything for him. But, unfortunately, ordinary photographic methods do not properly translate color values. So that along with his study of values he must make allowance for the frailty of the sensitive film to interpret nature literally. He must acquire, as it were, a photographic sense in grouping his objects so that the relative tone values will produce a harmonious effect in the photograph.



MISCELLANEOUS NOTES.

HARDNESS IN PRINTS.—Hardness is a term synonymous with want of detail in the half-lights. It is generally attributed to the lack of good qualities in the negative. An under-timed impression can give nothing else but a black and white print, but we have seen harshness in photographic prints taken from most excellent negatives. In fact the printing had nothing to do with the defect, which, on investigation, was traced to the final operation to which the paper, was subjected,—that is, the fixing process. The complainant blamed the paper and frankly told the stock dealer that its bad quality was responsible for his bad results. However, when questioned he acknowledged that the albumen paper printed well, and behaved admirably in the toning-bath, but after fixing looked hard and inartistic.

To do the photographer absolute justice, the paper had something to do with his want of success, but his lack of judgment had the greater responsibility. Having used a certain variety of albumen paper, and having obtained satisfactory results with his usual mode of fixing, he thought all papers would behave exactly the same under the usual conditions.

With the view of making good better, he tried a new brand of paper, and as he had used a certain strength of hypo and kept the prints from the former paper in it a certain length of time (20 minutes), he unhesitatingly subjected the new paper to the same ordeal, with the disastrous results exhibited. Had he stopped to consider that the difference in degree of permeability of the albumen film necessitated a difference in the duration of the time of fixing, he need not have had the trouble of censuring the dealer in albumen paper.

Instead of following an iron rule he should have exercised a little good sense and have removed his prints when fixed, and not have suffered them to lie for twenty minutes to give the hypo a chance to eat out all the half-tones.

He probably imagined that less than twenty minutes' immersion would leave a part of the silver in the fibre, and occasion the ruin of the print.

The object of fixing is to remove the unaffected silver, and as soon as the process is effected the sooner the prints are removed the better,—that is, if one desires brilliant impressions.

We take our negatives out of the hypo as soon as clear. Why not examine our prints by holding them up and looking through them, by transmitted light, in the same way as we do a plate?

OLD TIME INSTANTANEITY.—The marvelous degree of sensitiveness obtainable with our modern dry plate, with its sensitometer number ranging up to three-score and ten, is apt to make the younger generation of photographers imagine that gelatino-bromide of silver and instantaneousness are one and inseparable. Yet there are many among us whose locks are not yet silvery with Time's touch, who could give formulæ for bath and collodion by which a considerable degree of rapidity could be secured with the old wet plate process. But further back than this time, somewhere about 1850, we read of a process for obtaining very rapid plates, which, to judge from the results chronicled, must have been exceeding sensitive even to a moderate degree of illumination. The process, as recorded in the London Athenæum for 1850, is by Fox Talbot, and surely deserves a repetition from modern experimenters.

A weak solution of nitrate of silver is mixed with alcohol, so that one ounce of the mixture may contain three grains of nitrate. A plate coated with albumen, and dried by a strong heat, is applied in the silver solution, and allowed to dry spontaneously. It is then washed with distilled water to remove any excess of silver, and treated to a second coat of albumen, but in drying less heat is to be used. To an aqueous solution of proto-iodide of iron, add first an equal volume of acetic acid, and then ten volumes of alcohol. Allow the mixture to repose two or three days. At the end of that time it will have a changed color, and the odors of acetic acid and alcohol will have disappeared,—the liquor will have obtained a peculiar vinous odor. It is to be used in this state.

Into the iodide thus prepared and modified, the plate is dipped for a few seconds. All this operation should be performed under vellow light.

A solution is now made of nitrate of silver containing seventy grains to the ounce of water. To three parts of this add two of acetic acid. Then if the prepared plate is rapidly dipped once or twice into this solution it acquires a very high degree of sensibility, and it ought then to be placed in the camera without delay. The development is effected by the use of the proto-sulphate of iron, without the use of any restraining acid.

The high sensibility of the process will be appreciated from an account of an experiment tried at the Royal Institution. A glass plate prepared as above was placed in the camera, properly adjusted, in a darkened room, so that it was in focus to receive the image of a revolving wheel. Upon the wheel was placed a printed bill, and when the wheel was making two hundred revolutions a second, it was illuminated by a spark from the discharge of a Leyden battery.

Notwithstanding the rapid and the very transient and comparatively weak illumination, the bill was faithfully printed on the photograph plate.

The peculiarity of the process is the degree of sensitiveness obtained in connection with albumen, employment of albuminate of silver as a substratum for the sensitive film, and the use of proto-iodide of iron as a re-sensitizer. A theory was advanced at the time to account for the great sensitiveness by supposing the formation of a peculiar ether, or rather an iodide of ether. Whether this is correct or whether the nitrate of iron has a peculiar influence is worthy of investigation.

To obtain a clear impression from the wheel making 200 revolutions a second, and with the not very strong illumination from a Leyden battery, would be even a severe test for our modern No. 50 sensitometer plates.

PHOTOGRAPHY IN MILITARY OPERATIONS.—Mr. Arthur Batut, an amateur, has recently succeeded in taking aerial photographs by the aid of a kite carrying a very light camera. It appears also that the idea of the kite is not new. A well-known Italian savant, Borlinetto, claims priority in suggesting it; supporting his claim by quoting the following communication in the Camera Oscura, for June, 1886.

"The results obtained (in signaling) by the aid of incandescent lamps during the ascension of G. Tissandier are certainly worthy of praise; we now propose for military purposes a very simple and economical method which may serve both for photographing an enemy's camp from an elevated position in the air and for telegraphic signals at night. "It would only be necessary to construct a square kite of oiled silk or some strong material, and provided with a very light camera—of aluminium for example—communicating with an electromagnetic apparatus by two conducting wires, so that the lens could be uncovered and covered as desired. The photographic apparatus could be replaced by an incandescent lamp by which the Morse alphabet could be used at night for signaling. Two men could easily raise the kite, which would have the advantage of a balloon, captive or carrying observers, that it would not be destroyed by a rifle ball."

In the same order of things is a singular apparatus for military photography, the invention of Mr. Denian. It is a sort of projectile carrying at its upper extremity a minute camera. The projectile carries also a cord, one end of which remains in the hand of the operator. At the moment it begins to fall a parachute opens, and the projectile can descend only slowly. During this time the photographic apparatus is in action, and as soon as the operator judges the exposure sufficient he pulls the cord, which closes the camera, and draws towards him the apparatus.

LANDSCAPES WITH CLOUDS AND DISTANCE.—There is a peculiar charm in a landscape photograph in which not only foliage, but clouds and distant mountains perhaps, are shown with relative distinctions. The difficulty in obtaining such negatives results from the fact that the time of exposure required for the foreground is materially greater than that which would suffice for the clouds and distance. The method proposed by Woodbury, of cutting off the sky and distance by a sensitive card until the foreground is properly exposed, is applicable in some cases, but in others it is entirely worthless.

For several years I have been using orthochromatic plates, and experiments made with a view of finding the special adaptations of the plates to landscapes, reproductions, etc., have shown me that the relative values of the foreground and distance can be best obtained in landscapes by the use of orthochromatic plates and a yellow screen. A green glass with ordinary plates has been recommended, but I have not found any advantage in its use.

Let us suppose that we desire to photograph a landscape with foliage in the foreground, a blue, vaporous distance with snow-capped mountains, and clouds in a blue sky. With a yellow screen the image on the ground glass does not show the foliage dimmed; on the contrary it is brightened; the bluish tint of the atmosphere becomes greenish and much fainter, while the mountain tops appear yellowish. With an orthochromatic plate the result is all that could be desired, but ordinary plates cannot be affected by the colors in their true values.

By my method I have been able to photograph Mount Blanc from Geneva, a distance of twenty kilometres, and from the summit of Monte Rosa I have photographed Monte Viso, a distance of two-hundred kilometres.—E. V. Boissonnas in Revue Photographique.

PLATES FOR DEVELOPMENT WITH PLAIN WATER.—M. Leon Vidal, in his correspondence to the *Photographic News*, tells of a device of Mr. Leo Backlandt, a well-known Belgian chemist, by which gelatine plates are covered on the back with

the salts fit for the development. It suffices to immerse the plate in ordinary water, and this immersion dissolves the reducing salts, and the image is developed. M. Vidal considers it a very ingenious idea. He has made a successful trial of the plates, and thinks that they will be appreciated by amateurs desirous of dispensing with the trouble of preparing developing solutions beforehand. The fixing agent, ready powdered, is also inclosed in the box containing the plates, so that we have at once the sensitive film, the developer and the fixing salt to hand in the solid form. If the thing is really as good as it seems at first sight to be, what facility is offered for photography on long journeys! M. Vidal thinks that by the help of papers impregnated with, developing salts the same result may be obtained, and then this method will be applicable to plates, papers, and pelliciles of all makes.

PHOTOGRAPHIC SURPRISE AT THE PARIS EXPOSITION.—M. Vidal in the same correspondence speaks of a surprise for visitors at the Paris Universal Exhibition. "We have been told that a mechanician has been found clever enough to organize an arrangement whereby such a rapid completion of a photographic portrait is accomplished that the exposure and delivery of the photograph are almost simultaneous. A frame is placed in an opening, and some instants afterwards, by another opening, the portrait comes out.

It is not known what are the technical or practical means by which the promised result is obtained, but we predict a success for the author of this recreation if the work produced is at all passable.

Anschutz's Electro-tachyscope.—Under the name electro-tachyscope, Mr. O. Anschutz exhibited at the Photographic Exposition at Brussels, an apparatus by which the curious effects of the phenakistriscope may be exhibited to a large audience. The images of the successive phases of a desired movement are obtained by an arrangement similar to that devised by Muybridge, and the glass positives are fixed on the circumference of a steel wheel about two inches in diameter. As the wheel is rotated the images are illuminated by rapid flashes from a Geissler tube; the time of a flash being only about 1-1000 of a second, the outlines are not displaced during any one flash, and the eye receives the impression of a continuous motion. This apparatus might be combined with a projecting lantern, and the already surprising effects would be even more startling.

ANALYSIS OF THE PHASES OF A MOVEMENT.—M. Marcy has succeeded in taking the images of moving objects on a strip of sensitive paper which is unwrapped from a revolving cylinder at the rate of 0.8 metre per second. This velocity is sufficient, although double the rapidity may be obtained by the apparatus. No sharpness of outline can be obtained if exposures are made while the paper is in motion, but if by electromagnetic devices the paper be stopped 1-5000 of a second for each image, the outlines take all the sharpness desirable. Pictures of men and animals in motion may thus be made without the use of a dark background.

Praise of American Work in Europe.—On January 10th, the London Camera Club exhibited the one hundred slides received from America, in connection with the International Lantern Slide Exchange. The societies represented were the Photographic Society of Philadelphia, the Cincinnati Camera Club, the New York Society of Amateur Photographers, the Philadelphia Amateur Photographic Club, the St. Louis Camera Club, the Pittsburgh Amateur Photographic Club, and the Chicago Lantern Slide Club. The work was pronounced to be finer than any yet received in the Exchange. The average was rated high throughout, and some of the slides were pronounced extraordinarily effective in color and general technique.

CARBUTT'S FLEXIBLE NEGATIVE FILMS are rapidly growing in favor. Their extreme lightness and the ease with which they may be exposed and developed contributes much to their popularity, notwithstanding their price is above that of ordinary plates. We understand that the increased price is due to the cost of the celluloid, the monopoly in the manufacture being controlled by a single firm; also to the difficulty in securing perfectly translucent material free from spots or blemish.

Mr. Carbutt certainly deserves great praise for his successful introduction of a flexible film which can be used for anything for which a plate is employed.

We recently exposed a number of his films, coated with the Eclipse 27 emulsion, making use of Blitz-pulver as a source of light. The results were excellent.

A NUMBER of the amateur photographers of Honolulu met at the rooms of the Chamber of Commerce, and organized as the "Hawaiian Camera Club," with the following officers:

President, C. Hedemann.

Vice-President, George W. Smith.

Secretary-Treasurer, A. W. Richardson.

A committee was appointed to draft by-laws and report at a meeting to be held four weeks hence. The objects of the organization are, generally, mutual improvement in the photographic art, the collection of views taken by amateurs, etc. Similar societies are in existence throughout the United States and in the Australian colonies. Visitors from one to another are always made welcome, and the societies hold communication and exchanges with each other. There are about fifty amateurs in these Islands, which ought to be enough material to make the organization prosperous and useful. The public has an interest in it, as one function assumed by the Camera Club is the holding of exhibitions.

THE Third Annual Joint Exhibition of the Society of Amateur Photographers, of New York, the Boston Camera Club and the Photographic Society of Philadelphia, will be held in April of this year, in Philadelphia. The terms of agreement and the rules for entry, etc., will be found published in this number of the Journal. The rooms in which the exhibition is to be held are large and especially constructed for exhibitions. The wall space will accommodate a great number of pictures, and it is hoped that

the comributions will be large. In connection with the main exhibition several lantern slide exhibitions will be given. Foreign exhibitors may send their photographs by mail, unmounted. They will be mounted free of charge, on suitable boards, and will be framed for the exhibitor if the amount to cover expenses is remitted with entry. Full instructions, entry forms and labels, will be furnished on application. All communications should be addressed to Robert S. Redfield, Secretary, 1601 Callowhill Street, Philadelphia, Pa.

ON DEVELOPMENT.

Read before the London Camera Club.

ORIGINALLY, I intended my paper to be an account of some exhaustive experiments on various developers for gelatino-bromide dry plates, and for this reason I asked for a postponement of my paper, but I am sorry to say that business matters of very pressing nature have prevented me from trying a single experiment during the last month with regard to my subject, and I must, therefore, prepare you for the disappointment which is sure to follow the little I have to say; however, if I can only indicate a line for experiment, there are many in this Club who would, no doubt, follow it up and settle any doubtful points.

To begin with. How often we hear the merits discussed of the various kinds of developers, with regard to the amount of detail which can be obtained with them individually, or rather, the sensitiveness of a plate with a certain developer. One man says he can get the most detail with ferrous oxalate, another with pyro-ammonia, another with pyro and potash carbonate, another with pyro-carbonate of soda, another with the use of caustic, potash, or soda, instead of the carbonates. Lately some have given the palm to hydroquinone, and so on. Seeing very great diversity of opinion, I tried some time ago to settle this question for myself, in hopes that some difference would be found considerably in favor of a particular developer, especially when we consider that in our choice we can actually deal with a total change in the chemistry of the materials. I therefore, as carefully as possible, began without prejudice, and during my experiments, when I thought there was any perceptible differerence (I now only refer to sensitiveness), I tried, by alternation of formula, to get the best results in all cases. To my great surprise I found all developers, including ferrous oxalate, all the modifications of pyrogallic acid with various alkalies, and hydroquinone, exactly of equal value in the giving of detail. I must here state that the experiments were carried out with my own plates only, so that I cannot pretend to say that the results mentioned would occur under any circumstances; however, it certainly was remarkable that all kinds of developers gave the same results; and I should be inclined to gather from this that any future increase of sensitiveness will be found in the plate rather than in the developer.

I have often heard my friend, Mr. Payne Jennings, use the rather pretty argument that, no matter how short the exposure, the image must be "all there" if you could only develop it. The little "if," as usual, settles the question. It is not much consolation to tell anyone developing an under-exposed negative of an important subject that it is "all there;" his reply could scarcely be entered on the minutes of

this Club.

With regard to density of image, I also found that, provided the formula was arranged, equal apparent density could be had with all kinds of developers. I say apparent, because color has, of course, a great deal to do with this; however, as there was no difficulty in getting sufficient density with all kinds of developers, I could not make a great point in favor of any one kind.

Having mentioned color, I will digress for a few minutes to consider a very important matter with regard to it. What I am going to say is not new, but, as far as I know, much attention has not been paid to color of image, excepting in a wrong direction. So that I may be clearly understood, I may mention that on many occasions I have had to make special plates for photo-lithography and allied processes where great density of image is required. I happened to call on a gentleman using these plates for copying line drawings, and found him using mercury intensification with all his work. I asked whether he could not get sufficient density by development. "Yes, certainly," he replied, "but we find that when sufficient density is obtained by development, the fine lines of the drawing are blocked up, and detail is lost, so we prefer to stop development, and intensify by change of color without further deposit of silver to clog the negative." For line work the difference in the two methods is so remarkable as to place the matter out of question. I have still further evidence on this point. At one time I remember Mr. Payne Jennings being very anxious to have some quickly printing negatives for a very large order, and I suggested the ferrous oxalate developer to prevent the vellow stain of the film. He used the iron developer for some little time, and, without giving the reason, told me one day that he found a blocking of detail in the high lights, and so returned to the use of pyrogallic acid. To my mind the cause of the difference is simple, it being that a greater deposit of the silver compound to get sufficient density is necessary where the image is not of such a non-actinic color. Color of image is, I think, a matter of very great importance, and I hope that the members of the Club will give it their earnest attention. It seems to me that we ought to strive for a red or an orange color, and perhaps some means may be found of altering the color of a negative simply, and thus do away with mercury intensification, which has several well-known defects against its use. To sum up the matter briefly: the more non-actinic the color of the negative, the better for its delicacy and good printing qualities.

The present general use of sulphites is, no doubt, mainly due to the desire for pretty-looking negatives. There is also an idea that sulphites, in a measure, prevent pyro stain to the film itself; this may be so when development is not pushed very far, but otherwise I think the remedy becomes worse than the disease, as the stain which occurs in instantaneous work when forcing development in the presence of sulphites seems less amenable to the action of clearing liquids such as solutions of alum and the various acids.

There is an objection to the use of sulphites, so far as I am personally concerned: it is the lengthening of the time of development which takes place when sulphites are present in considerable quantity; this objection is also strongly complained of by professional portraitists. I confess to liking quick development, and I need scarcely say that when there are a gross or two of plates awaiting development, one gets rather tired of lovingly watching the slowly coming image.

Another substance, the meta-bisulphite of potash, has lately come into very ex-

tensive use as a substitute for the various sulphites. I would here mention that there is a very general mistake with regard to this salt, as it is confused with the bisulphite of potash. Even many of the large manufacturing chemists seem to be under the same mistake, as I have several times had the ordinary bisulphite given me instead. The formula is quite different; the meta-bisulphite being $K_2S_2O_5$; the ordinary bisulphite being KHSO3.

There is only one maker of the meta-bisulphite, the process being patented. According to the maker it is a permanent salt, and does not change by exposure of the dry salt to the atmosphere. In my own experience I find it better to use than the ordinary sulphites, less of it being required, and in consequence there is not so much slowing action in development.

I dare say that many here have noticed with me that, with a given quantity of pyrogallic acid, the presence of sulphites has a destructive effect on the density of the image; it is perhaps for this reason that formulæ for development containing sulphites are generally large in the quantity of pyrogallic acid recommended.

No doubt you have all noticed that the various carbonates when used alone, without the presence of caustic alkali, considerably lengthen the time of development as compared with caustic ammonia; it is no doubt for this reason that amongst professional portraitists the use of the ordinary pyro-ammonia is generally preferred.

Hydroquinone is now becoming a great favorite, and deservedly so, on account of its comparative freedom from staining the film. Until recently its great drawback has been in the length of time for development; but since the use of caustic potash with it, instead of the various carbonates, this trouble has been practically overcome. I tried a short time ago a formula by Mr. J. B. Payne, given by him in a communication to the Newcastle-on-Tyne and Northern Counties Photographic Association. It is as follows:—

Hydroquinone							4 grains)	
Meta-bisulphite of potash							4 " \.	
Meta-bisulphite of potash Bromide of potassium .							I grain	l
Distilled water							1 ounce	
Potassium hydrate							10 grains	
Potassium hydrate Distilled water							I ounce	5
Faus								

This formula works very well; with some plates the bromide may be omitted.

I should like to say a few words on the development of landscape negatives, particularly with regard to obtaining cloud effects in the same plate as on which the picture is taken. We all know, as a rule, the sky-portion is over-exposed, and very much so in comparison with the rest of the negative, and also that in many negatives we find clouds develop, showing all their detail at an early stage of development, and then rapidly solarise away, leaving in the case of a thinly-coated plate a thin, even sky-portion, without detail, and evidence of solarisation and halation in the picture; and in the case of a thickly-coated plate, a dense, even sky-portion that cannot be printed through, but as regards the half-tones a better negative. Now to get the best effects without double printing, development should be made as local as possible, the plate being washed along the sky-line as soon as the sky is considered sufficiently dense; development being carried on with the rest of the picture. Mr.

Payne Jennings is very skilful with local development, and I pass round a few of his negatives to show what I mean with regard to it. A great deal may be done to help gradation in the extremes of light and shade in the make of the plate itself, and I may mention that I have to prepare a plate specially for Mr. Payne Jennings containing a very large amount of iodide of silver. We all known how persistently Captain Abney has recommended the use of iodides in emulsions, and no doubt he is right where the best work is to be obtained. As a plate-maker, however, I have to be chary in the use of large quantities of iodide, on account of the lengthened time of fixing, and the alteration of the color in the image. For studio work, especially where large trade at small prices is carried on, I am afraid that a thickly-coated, heavily-iodized plate would be voted a nuisance, though better results would be obtained; but for landscape work, undoubtedly, such a plate is by far superior, where latitudes of exposure, better gradation, and freedom from halation are required.

I should like to say a few words with regard to the various acids for keeping pyrogallic acid in solution. The best, I think, is sulphuric acid, and I use I drachm of the strong acid diluted to I ounce of pyrogallic acid. Sulphurous acid, I find, destroys part of the density-giving power. Next to sulphuric I should choose citric acid, though it has the defect that the citrates formed have a very softening effect on the film.

The use of sulphites for the purpose of keeping pyrogallic acid I consider bad. I find that where large quantities of them are used, they create the very evil they are used to avoid, for instead of preserving the developer they destroy it;—not that they may not prevent the oxidation of the pyrogallic acid, but in becoming oxidized themselves, the development is stopped by the large quantity of sulphates formed; indeed, I have had over and over again solutions of pyrogallic acid rendered practically inert when exposed any time to the atmosphere.

A word on single fluid developers, and I have done. I think them most unscientific. We all know how very thirsty is alkaline pyrogallic acid for oxygen, and therefore concentrated single fluid developers must soon spoil if in contact with air. All concentrated solutions of pyrogallic acid will keep indefinitely, whether acid or alkaline, provided the bottle be full, and well-corked; but the bottle cannot always be full, and then, of course, alkaline solutions must at once suffer.

I. CADETT.

"PLATINO-URANOTYPE "AND "MERCURO-URANOTYPE," TWO NEW URANIUM PRINTING PROCESSES.

(A Communication made to the Sheffield Photographic Society.)

THE two methods of obtaining positive prints which I have the honor of presenting to your notice to-night, are, I believe, novel; and before I proceed with the subject of my paper, I beg to say a word or two of explanation.

Last winter (1887), when there was very little chance of obtaining shots with my camera, I amused myself by trying various processes of printing, amongst others the exceedingly old one of printing with salts of uranium.

As you all doubtless know, in this old process paper is simply coated with a strong solution of uranic nitrate, and is then dried. It is then placed behind a negative in the printing frame, and a faint image, full of detail, printed on it—direct sunlight being best for this purpose. This image is then developed by floating the print, face downwards, on one of the following baths:—

- 1. A weak solution of gold trichloride.
- 2. A solution of ferricyanide of potassium.
- 3. A silver bath.

The print is fixed by a rinse in a very dilute solution of hydrochloric acid, followed by a thorough wash in ordinary water. With the gold bath, a vigorous violet image due to metallic gold results; with the ferricyanide bath, an image of a burnt sienna colour is obtained; and lastly, with the silver bath, a gray image.

I was much struck with the softness of the images and the amount of detail given by these methods, but at once recognized the coarseness of the tones obtainable being the reason that the process was laid on one side as merely an interesting fact.

I tried a platinum bath as a substitute for those I have mentioned, with the natural result that no visible reduction of the latter took place. I thought no more concerning the subject until November last, when, reading about the reactions involved in the various iron printing processes, I was struck by the remarkable analogy which exists in the behaviour of the ferrous and uranous salts with solution of potassium, ferricyanide, and of salts of gold and silver. Not unnaturally I conceived the idea that this analogous behaviour might extend to the salts of platinum. Now the ferrous salts, such as ferrous oxalate, although they will reduce auric chloride to the metallic state, will not, without the assistance of a further reducing agent, such as neutral oxalate of potassium, reduce platinum from its salts. It was the discovery of this fact that enabled Mr. Willis to produce and patent his beautiful "Platinotype" process.

I presumed, then, that an assistant to the reducing power of uranous nitrate was all that was required to render possible a new process of platinotype on an entirely novel foundation. Starting on this basis, I tried sensitising paper with solutions of uranium nitrate and potassium platinous chloride. The paper was exposed behind a negative and a faint gray image printed by a few-minutes' exposure to direct sunlight, This was then developed in a hot, slightly alkaline solution, composed of hydroquinone, formic acid, and ammonium carbonate. I obtained a slight reduction of platinum by these means. Farther experiments showed me that printing should be stopped as soon as any trace of the image becomes visible. With prints given this much shorter exposure, I thought I had solved the problem, for prints thus treated developed with the greatest beauty; but after they were washed and dried I was disappointed to find that the image was gray and flat on the surface, having sunk into the paper, as was shown by the fact that on viewing the print as a transparency the image was full of This I attributed to the strong and hot developer attacking the sizing of the paper, and I am now convinced that such was the case. Now if into a test tube you pour some of this hot solution, and into this a few drops of platinum solution, an instant reduction of the latter takes place. From this it is easy to see that the reactions involved are not so much a question of the reducing power of uranous salts on those of platinum as one of uranic salts preventing or protecting the platinum salt from becoming reduced by an otherwise sufficiently powerful reducing agent, and that the action of light on the uranic salt, reducing the same to the uranous state, serves the purpose of removing a barrier to the action of this reducing agent or developer.

With this theory as a guide, the problem became much simplified, since a choice of developers becomes very easy by test tube trials. A cold solution in the first place obviously would be desirable, and the following seems to be suitable: — First make a saturated solution of neutral oxalate of potash, and dissolve dry ferrous oxalate in this to saturation. By the use of this cold development I got over my main difficulties, for I have, as you will see later, obtained platinum prints in half tones, and it is to prints thus obtained that I have given the name of "Platino-Uranotype."

It will be needless to call your attention to the fact that, like Artemas Ward's tale, "they are far from purfick," but they will serve the purpose of affording proof of my success so far as the rough chemical problem is concerned. The refinement and perfection of the process can only be achieved by repeated and patient trial, in order to ascertain the best proportions of the sensitising solutions, etc., and my object in bringing the matter before your notice at this very early stage is in the hope that far more competent hands than my own may be started in the direction. The process is very simple, for the operations involved are merely:—

- 1. Coating the paper.
- 2. Exposing same in printing frame.
- 3. Development (which takes only five to ten seconds).
- 4. Fixing in HCl (one and a half per cent. solution).
- 5. Rinsing in water, drying, and mounting.

In my most recent experiments I have substituted the uranium chloride for the nitrate in the sensitising solution, and I am inclined to think that better results are to be obtained from its use. As in Mr. Willis's processes, chlorate of potash may be added in minute quantities to the sensitising solution to increase contrasts.

As far as my necessarily limited knowledge at present goes, the following seem good proportions for the sensitising solutions:—

A.

Saturated solution of uranium chloride.

В.

Potassic platinous chloride 60 grains. Water, distilled 1½ ounce.

Ninety minims each of A and B are spread over a well-sized sheet of paper 26x20 inches.

Now for the most perfect form of platinotype (by any process) to be obtained, it is not difficult to see that the platinum should not form a part of the sensitising solution, but should be deposited on an image already formed, by an action similar to that of toning silver prints with gold, and for this reason no platinum in the "paper" or "printing-out" process can ever give the detail of a silver print. I have experimented with a view to a modification of the "Platino-Uranotype" process with but partial success, and it is through these experiments that I arrived at what, so far as I can ascertain, is a second novel process—"Mercuro-Uranotype." This is the title which I have given to this second process, which may turn out to be useful for rapid proving of negatives, if for nothing else, for the tone is not very objectionable, and if preferred, may be modified. Paper is coated with one or other of our uranium solutions, to which has been added some saturated solution of mercury bichloride (say one part mercury solution for every eight of the uranium solution). A sheet of paper is coated

with about one hundred and seventy minims of this solution and dried in the dark. It is then printed behind a negative until it attains full strength, "" will take only a few minutes; it may then be floated on solutions of gold or pia num to obtain a more pleasing tone, and next placed in water acidulated with HCl or the toning omitted and the print treated as if it were Pizzighelli paper. Thus it will be seen that this process is one of the simplest known,

In conclusion, then, may I venture to say that if more attention were directed to the salts of uranium many latent and valuable properties would in all probability be discovered; their reactions are very powerful and should be more generally known than they are at present. I believe much remains to be discovered in this direction.

As to the "Platino-Uranotype" process, the rough prints I have here will afford proof of my success in obtaining pictures in platinum black by novel means; and I may tell you that throughout my experiments with this process I checked results by treating prints on plain uranium paper in the same manner as the others, in order to make certain that the appearances observed were wholly due to the presence of platinum salts.

Alleyne Reynolds.

REPRODUCTION OF NEGATIVES (DIRECT NEGATIVES).

(Photographische Correspondenz.)

T is often necessary in the photo-mechanical processes to make use of reversed negatives without stripping the film, in order that the impressions may properly represent the original. The safest and easiest plan is to make by contact a direct duplicate negative from the original negative. There are two methods for reproducing a negative from a negative by contact, namely, the Dusting-on process of Obernetter, and the method of Bolas with gelatino-bromide plates. My view is to elucidate the latter plan. A gelatino-bromide plate is dipped in a four per cent. solution of bi-chromate of potassa for two or three minutes, the superfluous liquid drained off at one corner, and the plates then placed upon two or three folds of blotting paper till every portion of the unabsorbed fluid is removed. If this precaution is neglected, the superfluous bi-chromate will crystallize upon the plate and ruin it for the purpose intended. When the plate is thoroughly dry, it is placed in contact with the negative desired to be reproduced, and the exposure continued until a weak positive image is produced upon the back of the plate, that is, the glass side. According to the appearance of the positive image conclusion may be drawn as to the resulting negative, and how it should be developed. After the impression is taken the plate is washed in half a dozen changes of water, and then directly developed. The development can be carried on in gaslight or weak daylight without any danger of fog,-an advantage which allows one to watch the progress.

During the process of development the positive gradually disappears, and the negative begins to show itself. When the development is carried far enough, that is, when the negative is completed, fixing may be accomplished. Up to this point it is all plain sailing, but after this Rubicon is crossed the difficulties begin to present themselves. With some sorts of plates directly after the fixing large and small bubbles make their unsightly appearance in the shadows. Those who are frequently called

upon to reproduce direct negatives will find it advantageous to prepare the surface of the glass before ing the emulsion, or get the gelatine plate maker to cut especially prepared glass. If hin plate glass is to be employed. The best mixture to be used as a substratum for the gelatine emulsion is made as follows:

Bi-chromate				٠,						10 parts.
Soda-water-glass								٠	٠	ı part.
Distilled water .								٠		20-25 parts

The water-glass films are thoroughly dried, and, after twenty-four hours hardening, are rinsed off, and are ready for flowing with the emulsion. If care is taken that the emulsion is not old or too fluid, there will be no inclination in the film to curl up, and the process can be carried on without difficulty. The advantage of having a substratum for the film will be appreciated, when one finds that by the fault in development recourse must be had to either intensification or reduction to make the plate suitable for the purpose for which it is intended.

Now immunity from frilling or blistering will enable the operation to be performed without any danger of the usual unpleasant results. Traces of the chrome salt do not materially interfere with the results. If allowed to remain the only objection is a tendency to flatness and softness. Greater brilliancy and strength are insured by the complete removal of the bi-chromate of potassa. Its removal is best effected by bathing the duplicate negative in a solution of one part sulphuric acid and twenty-five parts water until the shadows are clear, and then washing it thoroughly. If the details in the high lights are overcast, but the other parts of the negative in proper relation, the negative may be improved by converting the bromide silver image into a chloride of silver image. This may be effected by placing the plate in a solution consisting of

Hydro	ch	lor	ic	ac	id							٠			3 parts.
Bi-chro	m	at	e p	ot	as	sa									ı part.
Alum											٠		۰		5 parts.
Water															100-120 parts.

until the image is entirely bleached.

The plate is then to be thoroughly washed, and afterwards developed with old oxalate developers to the degree to obtain sufficient detail and strength in the high lights, when the development may be stopped. Care should be taken that the development be not carried too far, so as to cause the high lights to appear on the back of the plate. The unreduced chloride of silver is fixed out in a dilute solution of hypo, 1-50. The lights, which previously were too much covered over, now become transparent. Practice can alone give the operator the indication of a proper limit in development. Finally, the plate is as usual thoroughly washed from hypo, dried and varnished.

Deviation from the above method can be made: a weaker chrome bath may be employed, as well as shorter exposure for less brilliant negatives. A stronger bath than four per cent. causes recrystallization the bi-chromate salt, whilst too long exposure makes the negatives hard, and increases the difficulties of development.

FRED. HAWLICK.

EXPERIENCES WITH VARIOUS FLASH LIGHTS.

St. Louis Photographer.

THE use of what is called flash lights has opened up quite a new field for photographers, both amateur and professional. So many things can be done by its aid that could not be attempted before, that it tempts the most indifferent to fresh efforts. My time has been taken up so fully in the studio that any kind of photography, except at night, has been impossible to me, so that I hailed the advent of the flash light as a means of obtaining pictures which I could use without needing either skylight or daylight. Many were the disappointments and failures. Some of these I purpose to detail as a warning to others.

The first plan recommended was to fire the pure magnesium powder upon the gun cotton, and a demonstration was made of this plan before the Photographic Section of the Academy of Science. This demonstration and some subsequent experiments made at home, convinced me that to be successful some other method would have to be adopted to fire the powder, which would insure the ignition of the whole of the magnesium in one flash. Just as I had given up the attempt, my friend, Mr. John Bartlett, of Philadelphia, sent me some prints made by him with his compound called Blitz-Pulver, that certainly are the finest things of the sort I have ever seen, fully exposed and lighted as well as any daylight picture. These raised my enthusiasm again, and caused another demonstration before the Section, and I went through my home from parlor to kitchen with the Kodak and Blitz-Pulver, making pictures of my children at home, and their play and household work, and also of the dog. These pictures are taken with from thirty to fifty grains of Blitz-Pulver, touched off on a McCollin ignitor; were taken with both Kodak and with a 4 x 5 camera, with a view lens, and are all well-exposed, and the light has penetrated to the farthest corner of the room. There is only one drawback to the use of this compound, and that is it makes some smoke, which is difficult to get rid of in a house; but it is not singular in this, for every other compound I have tried makes more smoke than this, and some have such an objectionable smell that your friends would certainly not ask you to come again if you let off one of them in their houses.

Since these pictures have been made there have been put upon the market two lamps, designed for the better ignition of the pure magnesium powder. A comparative series of experiments, made by the Camera Club, of Rochester, demonstrates the fact that in neither of the lamps is all the powder ignited. In one case a mass of the powder, in an incandescent state, fell, after being shot up through the flame of the alcohol lamp, and might have caused some damage if it had fallen upon any combustible material.

There is no doubt that if the pure powder can be ignited at once, without the spluttering made by the gun cotton, it would be for the best, because of the small amount of smoke engendered, and Mr. John Dumont, the well known amateur in this city, has devised a plan by which he thinks that end can be attained. This will be tried at the next meeting of the Camera Club, and I will report progress. His plan is to take an ordinary wire corn popper, pull out some gun cotton loose and place it on the bottom of the popper, sprinkle the magnesium powder lightly all over the cotton, and, when ready for the exposure, place an ordinary alcohol lamp in the position you wish the flash to be, and place the popper over the flame. The flame being

under the gun cotton, and also being large and spread by the wires, the flash takes place all over the cotton at once, and no after spluttering takes place.

Another experiment which has been tried by Mr. Hovey bids fair to be the best plan yet. He took five grains of pure magnesium powder and five grains of Blitz-Pulver and ignited it upon a pane of glass, with an ordinary match, the result being a negative nearly as well lighted as one made with a full charge of Blitz-Pulver—thirty grains. This plan gives the maximum of light with the minimum of smoke. From what Mr. Hovey told me, I should judge that ten grains of magnesium powder and ten grains of Blitz-Pulver would insure a flash that ought to be successful, even if the room should be large, and the smoke from that small quantity would be scarcely perceptible.

A word about development; a normal developer,—that is, the ordinary amount of pyro to soda-potash or other accelerator,—will give you hard contrast with the flash light. I find that the accelerator must be in excess of the pyro to the extent of two to one; get out all the details possible, and if there is not density enough wash off the developer and mix up fresh with an excess of pyro and flow over the negative, when it will intensify as much as you desire.

G. HANMER CROUGHTON.

Rochester, N. Y.

A TRIP THROUGH CHINATOWN WITH A KODAK CAMERA.

GENTLEMAN, the happy owner of a most fluent tongue, entered the Times localroom last night, and laying a small box, about six inches long by three high, on the city editor's desk, asked if he would like to go out "shooting" that evening. The mandarin of the blue pencil replied that he had no great hankering for the sport at that moment, being at peace with all mankind, except a few unesteemed contemporaries, and these he preferred should die a lingering death. The visitor hastened to state that he was not thinking at all of shooting to kill, only of shooting for views, He simply desired to exhibit, for the benefit of the local room, a little dodge for taking instantaneous photographs by day or night. Turning to a companion who had entered with him he desired him to fire a "shot." That gentleman produced a kind of scoop shovel, painted white, and pulled the trigger, while the first visitor pointed the little box at an occupant of the room. Suddenly a snap was heard, a flash like lightning dazzled the eyes, a little puff of smoke rose to the ceiling and the "subject" was informed that his photograph had been taken. "That's all the 'shooting' I do," said the visitor. "My name is S. C. Jones, agent for the Kodak Instantaneous Camera, and if you will send a reporter with me this evening I'll show him a little night gunning.

A reporter was detailed to accompanying the head artilleryman, who proposed beating the Chinatown preserves by lamplight. The expedition numbered four; the head cannon-box carrier, the "flash" firer, an aide-de-camp and note-taker. Mr. Jones said he had reconnoitered the ground the previous night, and was prepared to lead the way. He marched the invaders into a little 6x10 cubby hole in a dark alley, down in Chinatown, used as an opium den by a fat, old, spectacled Chinaman named Yuen Kee, but whom Mr. Jones familiarly addressed as "papa." "Papa" was very

glad indeed to see Mr. Jones, and showed the army the opium stalls where a few Chinese fiends were "hitting the pipe." Mr. Jones explained most eloquently to "papa" and his customers that he was the agent for a cheap electric light, without which no Chinese residence was complete, and offered to give an illustration of how it worked. Assent was freely given, and literally in a flash, the assistant artilleryman shot his apparatus, and a good picture of the opium fiends, puffing away, was taken. "Papa" seemed delighted, and never suspecting his picture was, being stored up in the box, rubbed his eyes and asked for more. More flashes, and "papa" in various attitudes, his customers and his den, were transferred to the films. The flashes attracted a large number of Chinese, who peeked in through the windows in astonishment. Gen. Jones led the way next to a Chinese barber shop, where, though no electric lights were needed by the proprietor, no objection was made to an exhibition. With the diplomacy of a Bismarck, Gen. Jones "shot" a highbinder who was getting his head shaved, another washing his face, and the boss barber and his assistants in various attitudes of astonisment.

Next a raid was made on a Chinese general store, where another "shot" was taken and a firstrate picture obtained. All this time it must, be remembered, not even a suspicion of the true object of the visit passed over the Chinese mind, Gen. Jones talking most evangelically about his electric light, and sighting his cannon camera so skilfully that no attention was paid to the deadly machine.

A Chinese fruit stall was next "shot," and then a blonde young woman with a red wrapper and a hoarse voice, who peeped through a latticed window and invited the army to pay her a fleeting visit, fell a victim. She, however, was the only one so far who objected. She anathematized the "shooters" forcibly and fluently. But then she was an American and not Chinese.

Another Chinese store was raided, where the proprietor and two of his wives were standing behind the counter putting up Chinese delicacies in packages. When the flash went up, the two Chinese girls squawked in terror, and, crouching behind the counter, jabbered something about white devils. Preparations were being made to carry the war into Africa and Mexico, when the assistant artilleryman made the alarming discovery that the ammunition was all expended. A council of war was accordingly held and a cessation of hostilities for the night ordered by Gen. Jones. The army then took a wet "shot" themselves and disbanded.

The instrument with which the cannonading was done is what is known as the Kodak camera for taking instantaneous photograhs either by night or day. It is 7½ inches long by 3½ deep and three inches wide, and weighs, when ready for action, just one pound and ten ounces. All that is necessary for good work is a little practice in pressing the button on the top of the camera which opens and closes the lens, and, perhaps the most important of all, holding it perfectly steady. For night work one must have an assistant to set off the flash. This is composed of Blitz-Pulver—a magnesium powder made in Philadelphia. It is spread on a small plate, shielded at the back by an upright piece of tin to protect the eye. A toy pistol cap is placed in the center of the powder and discharged by pulling the trigger of a small hammer. A flash as vivid as lightning occurs immediately, and the photograph is taken. It can be used in a lighted room or in a dark one, in the street or inside the house—in fact, anywhere. There is enough material in the camera to take 100

photographs, which can be taken consecutively as fast as the button can be pressed. The lens produces a photograph about three inches in diameter. These can be sent to any photographer to be developed, and printed either on blue, albumen or bromide papers. They can also be enlarged or reduced at wish.

The prints of the views taken last night can be seen either at the agent's or at the TIMES office.—Los Angeles Times.

PHOTOGRAPHIC SOCIETIES.

JOINT EXHIBITION UNDER THE AUSPICES OF THE PHOTOGRAPHIC SOCIETY OF

THE third annual joint exhibition of the Society of Amateur Photographers of New York, the Photographic Society of Philadelphia, the Boston Camera Club, open to all Photographers, Foreign or American, will be held under the auspices of the Photographic Society of Philadelphia, April 8th to 20th, 1889, at the Galleries of the Pennsylvania Academy of the Fine Arts, Broad and Cherry Streets, Philadelphia.

The following terms of Agreement and Rules were adopted at a meeting of representatives from the three societies held in New York, October 22, 1886, revised and amended, November 10, 1888.

The Photographic Society of Philadelphia, the Boston Camera Club, and the Society of Amateur Photographers of New York, hereby mutually agree to unite in holding an annual exhibition for the promotion of the artistic, scientific and technical excellence of Photography, in accordance with the following conditions and rules:

CONDITIONS.

- 1. The Exhibitions shall be held in New York, Boston, and Philadelphia, in rotation.
- 2. Three representatives from each of the three Societies shall constitute a Joint Exhibition Council, having general charge of all matters connected with the Exhibitions, with power to alter or amend the rules.
- 3. Meetings of the Joint Exhibition Council shall be called at the request of three or more members of the Council, representing at least two Societies, and shall be held in the City of New York, unless otherwise specially agreed.
- 4. At any meeting five members shall constitute a quorum, provided that all of the Societies are represented, either by regular delegates or by duly constituted proxy.
- 5. The delegation from each Society shall be entitled to three votes on any question properly before the Council.
- 6. The immediate details of each Exhibition shall be in charge of a Committee of Arrangements numbering five, appointed by the Joint Exhibition Council, consisting of the three representatives of the local Society, and one from each of the other Societies.
- 7. At each Exhibition diplomas shall be awarded, by a Board of Judges, consisting of five persons, chosen by the Committee of Arrangements with special reference to their combined knowledge of the Artistic, Technical and Scientific requirements of Photography. No other awards of any kind shall be made.

8. Diplomas shall be awarded *only* "for Artistic, Technical or Scientific excellence." In making their selections, the Judges shall give due recognition to work in any of the various branches or processes of Photography which may show unusual merit, obtaining if necessary the aid of experts in any particular line.

9. The entire number of awards for each Exhibition is left to the discretion of the Board of Judges, dependent upon the amount of work of high merit exhibited, but shall not exceed 25. Seven of these shall be for special excellence, one in each of the

following classes:

Landscape or Marine Views.

Portraits.

Genre Subjects and Figure Compositions.

Enlargements.

Lantern slides (set of six-negative and positive by exhibitor).

Applied Photography—Scientific or Technical.

Work by Ladies.

Awards may be made for an entire exhibit or for any part thereof.

10. All photographers are at liberty to compete, but the Judges are instructed to give preference (other things being equal) to work done entirely by the exhibitor.

11. The members of the Board of Judges shall not compete for awards, nor be connected in any way with the management of the Exhibition.

12. The decision of the Board of Judges shall be final.

RULES.

1. No picture which has once been exhibited in competition at a Joint Exhibition shall be again admitted for competition.

2. No picture will be received "for exhibition only," unless by special consent of the Committee of Arrangements.

3. No pictures which have taken prizes elsewhere shall be so designated, until after the awards have been announced.

4. All pictures, except those from foreign exhibitors, must be framed (with or without glass, at the option of the exhibitor). Pictures from *foreign exhibitors* should be sent by *mail*, *unmounted*. They will be mounted for exhibition by the Committee of Arrangements, free of charge, or will be framed if the proper amount to cover the cost is remitted with entry.

' 5. The Committee of Arrangements shall have the right to reject the whole or portions of any exhibits offered: and if in order to fairly apportion the space at their disposal among the various exhibitors it becomes desirable to leave any pictures unhung, the rejections shall be made at the option of the Committee, either from exhibits below the average in quality or above the average in number of pictures or wall space required.

6. Entries of all exhibits must be made in *duplicate*, on blanks issued by the Committee of Arrangements, giving, for catalogue purposes, etc., information on the

following points:

Number and size of frames.

Amount of wall space required.

Total number of pictures.

Subject or title of each.

Lens and plate used for negative.

If for sale. Price.

Name, address, and society of exhibitor.

7. The exhibitor's name and address, also a number corresponding to the descriptive number upon the entry form, shall be clearly written on the labels provided which shall be attached to the *back* of each frame.

When two or more prints are mounted in one frame, a designating letter shall be placed under the centre of each print, and all letters so placed shall appear in the entry form opposite the title of their respective pictures. *Nothing else* may appear in *front* of frame except title of picture and exhibitor's name.

8. No picture may be withdrawn before the close of the Exhibition.

9. All pictures must be sent at owner's risk, prepaid and delivered to the Committee of Arrangements at the place by them indicated, and return charges collected by carrier.

10. The Committee will not be responsible for any loss or damage that may occur to exhibits while in its charge, but will use all reasonable care to prevent such occurrence; and at the close of the Exhibition will repack each exhibit and ship as directed by the exhibitor.

11. Advertising in any form in connection with an exhibit is strictly prohibited.

12. A charge shall be made for wall space at the rate of twenty-five cents per square foot (the minimum charge being one dollar) to all except members of the three societies and foreign exhibitors.

The amount of charge for wall space must be enclosed with entry form to the Committee of Arrangements.

If any of the pictures entered are not hung, a due portion of the charges will be returned.

A commission of ten per cent. on all sales will be retained.

13. Arrangements shall be made for the proper exhibition of lantern slides on the screen.

14. The Committee of Arrangements, acting for the local society, shall receive all income and make all payments for expenses of the Exhibition, the said Committee being required to turn over to the local society, within a reasonable time after the close of the Exhibition, properly authenticated vouchers for all expenditures, together with a statement of receipts, and the balance on hand, if any.

Entry Forms and Labels for back of frames will be furnished on application. Please state probable number of Labels required. (See Rules 4, 6, 7 and 12).

All Correspondence should be addressed to Robert S. Redfield, Secretary, 1601 Callowhill Street, Philadelphia, Penna.

All pictures must be sent, charges prepaid, addressed to The Photographic Society of Philadelphia, care of The Pennsylvania Academy of Fine Arts, Broad and Cherry Streets, Philadelphia, Penna., U. S. A., and delivered before 9 P. M., Monday March 25, 1889. The attention of Foreign Exhibitors is directed to Rule 4.

Catalogues (price 15 cents) containing full particulars of the exhibits may be obtained at the Galleries during the exhibition, also from any member of the Committee of Arrangements.

It is intended that the exhibition shall be open day and evening, Sunday excepted, and several evenings will be devoted to the display of Lantern Slides.

The names of the Judges and further details will be announced hereafter.

While ample space is at the disposal of the Committee, it is desired to maintain a high average standard of excellence. Intending exhibitors are therefore requested to send a few *choice* examples of their work rather than a large number of specimens of only ordinary merit.

It is probable that at the close of the exhibition, by request of the Boston Camera Club and at their expense, the entire collection of pictures will be forwarded to Boston, there to be publicly exhibited for a brief period, and thence returned to their owners. Any exhibitor not consenting to this arrangement will please give notice to the Committee of Arrangements upon entry form.

COMMITTEE OF ARRANGEMENTS.

JOHN G. BULLOCK, Chairman,
528 Arch Street, Philadelphia.
ROBERT S. REDFIELD,
SAMUEL M. FOX,
Photographic Society of Philadelphia.
H. T. DUFFIELD,
Society of Amateur Photographers
of New York.

EDWARD F. WILDER,

Boston Camera Club.

Philadelphia, January 15, 1888.

THE PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.

A STATED meeting of the Society was held Wednesday evening, February 6th, 1880, with the President, Mr. Frederic Graff, in the Chair.

The Secretary reported that Messrs. E. & H. T. Anthony & Co. had presented to the Society a bound copy of Volume 19 of Anthony's *Photographic Bulletin*, and that Mr. George B. Wood had presented a catalogue, etc., of the recent photographic exhibition held in Vienna. Both gifts were acknowledged with a vote of thanks.

A package of tickets for use of members and their friends for a lecture on "Amateur Photography," by Prof. Charles F. Himes, under the auspices of the Franklin Institute, was also received with the thanks of the Society.

A report was received from the Executive Committee asking for an appropriation for binding journals, etc., and also suggesting a plan for selecting each year from the work of members six pictures to be considered the honor pictures for the year, copies of which should be preserved by the Society. As the plan after discussion among the members seemed to be imperfect in some of its details, it was referred back to the committee for their further consideration, and report at the next meeting.

The Committee on Lantern Slides presented the following report:

Your Committee on Lantern Slides beg leave to report that the lantern and slides belonging to the Society have been turned over to its care by the Executive Committee, and it has entered upon the duties assigned to it under the by-laws. As a first duty the Committee report that it is ready to receive gifts of slides from members. Contributions have already been made by Dr. Ellerslie Wallace, Wm. H. Rau, Henry T. Coates and C. R. Pancoast, of which detailed report will be submitted at the next meeting. The Society has at present nothing which could be called a "permanent collection of slides," and your committee have a suggestion to make, which, if adopted by the members, will give a nucleus from which to start. There have come into the hands of the committee the slides contributed by members to the Interchange of 1887-8, about 54 in all. These are the individual property of members, but if contributed to the Society will serve as a starting point from which your Committee hope a valuable collection will grow. A list of these slides is submitted herewith.

In this connection the committee suggest the propriety, and recommend the formation of a special series of slides illustrative of the City of Philadelphia. There must be in the possession of members of this Society, negatives of places and buildings of the greatest historical interest, and a collection could easily be made (if the interest and co-operation of the members is secured) which would be of the highest value. The series would include views in the park, as well as of public and private buildings in the city, and the historical importance of such a collection need only be suggested to be appreciated.

The Committee have adopted a system of labeling slides which will preserve a record of the names of the maker of the negatives, and of the members presenting slides. These will be attached by the Committee, or labels will be furnished to the members on application.

The attention of the committee has been called to the fact that under the rules governing the American Lantern Slide Interchange, the Society is required to elect a representative at its January meeting. As this was overlooked then, such an election should be held at the February meeting. The Interchange slides to be shown at the conversational meeting, February 20th, are those of the Philadelphia Amateur Photographic Club.

At the last conversational meeting, January 16th, the slides of the Louisville and New Orleans Camera Clubs were shown. These were all gelatines slides, of fair quality, and those of the latter organization were of characteristic subjects of New Orleans and the lower Mississippi. Slides were also shown by Mr. David Pepper—some choice views at Bar Harbor; Mr. Frank H. Rosengarten, Mr. Wm. H. Rau—animal studies at the Philadelphia Zoological Garden; Mr. Francis T. Fassitt—several fine foreign subjects principally; and some fine views in Germany and Switzerland, by Mr. O. D. Wilkinson, a visitor.

WILLIAM H. RAU,
FRANK BENNETT,
EDMUND STIRLING,
Committee on Lantern Slides.

The Committee on Membership reported the election of the following active members:

John P. Anshutz, Ellwood R. Kennington, E. M. Pine, Ogden D. Wilkinson and Frank S. Harris.

The Committee on Joint Exhibition reported favorable progress in their prepara-About two thousand circulars with rules, etc., had been distributed to photographers and photographic societies in all parts of the world, and every effort was being made to secure exhibits of the very best photographs obtainable from all sour-Applications for space had already been received, which included a very prominent English photographer who proposes to exhibit some fine work of large size.

The committes had in contemplation four evenings devoted to lantern slides. In addition to the slides sent for the regular competition, one evening would propably be given to the slides sent to the American Interchange by the Camera Club, of London, and it was thought that the remaining evenings might be devoted to slides rep-

resenting work of our own members.

In accordance with the report of the Lantern Slide Committee, and as required by the rules of the American Lantern Slide Interchange, Mr. J. G. Bullock nominated Mr. W. H. Rau as Director, to represent the Society in the Interchange for the coming year, to which position he was unanimously elected.

The President appointed Messrs. John C. Browne and F. T. Fassitt auditors, to examine the accounts of the Treasurer and Treasurer pro tem. for 1888.

Mr. Burrows (a visitor) showed a form of lamp which he had advised for use with flash-light compounds. The powder was inserted on a small funnel-shaped receptacle, the bottom being connected by a rubber tube with the usual bulb. A short distance above the cup for the powder a metallic ring about three inches in diameter was suspended, the ring being wrapped with asbestos fibre. The asbestos was wet with alcohol, which, when ignited, produced a large flame, into which the powder being suddenly forced by pressure on the bulb, was instantly consumed with a most brilliant light. Powdered magnesium thus used was entirely consumed, with practically no smoke or residue. Mr. Burrows also showed another form of the lamp which could be used with one hand a trigger releasing a piston which, actuated by a spring, gave the necessary puff of air to blow the powder into the flame.

Mr. Lewis called attention to the fact that with flash-lamps of similar construction to that shown by Mr. Burrows a small portion of the powder was sometimes drawn back into the mouth of the tube, which, on being ejected the next time the light was used an instant later than the main charge, was apt to make a secondary flash, which was undesirable if not detrimental to good work. To obviate this he recommended inserting a very small piece of absorbent cotton into the bottom of the powder cup, which being blown out with the powder would prevent any getting into the tube, and would also be entirely consumed with the powder. The cotton could also be used with lamps in which the flame was blown against the powder, to hold the compound and prevent any of it being blown away and not consumed.

Mr. Lewis also mentioned having been troubled by a plate frilling at the corners. which he overcame by applying blotting paper. He thus absorbed the water from the film, and by gently patting it the film was made gradually to adhere again to the glass in its original position free from ridges or other marks.

Mr. Earl showed one of Beck's wide angle lenses fitted with the Iris diaphragm, which had many excellent features.

Dr. Reed showed what was apparently an umbrella, but on removing the case and unscrewing the handle it proved to be a tripod for use with a detective or other light camera. The legs were formed of light metal tubes, each made in two sections so that it could be extended to the full height necessary for a practical tripod. The umbrella tripod was of English make.

Mr. Bullock mentioned that in toning some prints on a new brand of paper he was trying, on putting them into the fixing bath, which was of usual strength, he found the albumen immediately began to dissolve and leave the paper. Thinking the bath too strong he diluted it, only to make matters worse. A teacupful of salt was then added to the fixing bath, which instantly stopped the trouble, and excellent prints were obtained on paper which otherwise might have been condemned.

Mr. Wallace thought if the silvering bath was too weak, it was liable to cause the trouble referred to with some paper. He recommended the use of a minute quantity of alum in the silver bath to coagulate the albumen.

Adjourned.

ROBERT S. REDFIELD, Secretary.

BOSTON CAMERA CLUB.—The annual meeting of the Club was held at the rooms on Monday evening, the 7th instant.

The reports of the different officers were presented, showing an encouraging state of affairs. The membership has increased fully one-fifth during the year, while the financial exhibit was so satisfactory that it was voted to pay fifty per cent. of the Club loan from funds in the Treasury.

Considerable new apparatus has been purchased and paid for during the year.

The following officers were elected for the ensuing year: President, George E. Cabot, Brookline; Vice-President, Francis Blake, Auburndale; Secretary, Edward F. Wilder, Boston; Treasurer, Wm. Garrison Reed, Boston; Librarian, William S. Briggs, Boston; Executive Committee for Three Years, Charles H. Currier, Boston; John G. Hubbard, Brooklyn.

A pleasant feature of the meeting was an informal exhibition of work of members only.

A circular had been sent out by the Entertainment Committee inviting each member to contribute not more than two mounted prints for this exhibition.

The rules govering it were few and simple:

- 1. The prints must be direct, neither enlargements nor reductions being eligible.
 - 2. Nothing but title to appear on the front of mount.
 - 3. Prize to be awarded by vote of those present at the meeting.

The response to this invitation was very general, forty-six members contributing ninety-two prints for competition, besides more than fifty for exhibition only, the latter including several enlargements.

The pictures were arranged on the walls of the Club's reading-room, and made a very interesting and creditable exhibition, most of the best workers being represented. The vote, which was announced at the close of the meeting, was as follows:

No. 8. View at North Grafton, by C. H. Currier, received 9 votes.

No. 29. Artists' Retreat, Waterville, N. H., by Wilfred A. French, 7.

No. 35. The Last Load (a hay-making scene), by Wm. S. Briggs, 6.

No. 7. Salting the Sheep, by Mr. Currier, 6.

The prize, (a copy of Burnett's Art Essays, presented to the committee by two members of the Club), was awarded to Mr. Currier.

An elegant collation concluded one of the fullest and most enjoyable meetings the Club has ever held.

E. F. WILDER, Secretary.

ATLANTA CAMERA CLUB.—The first outing of the Atlanta Camera Club, which was organized September last, was enjoyed on election day. The place visited was Stone Mountain, noted throughout the South for its vast beds of granite. The camera had ample sweep, and every variety of picture was obtained from the romantic valley with its brooklet coursing along, to the bold, ragged cliff, a thousand feet perpendicular.

The second outing was made on Thanksgiving day to Salt Springs, on invitation of the proprietor of the Sweetwater Park Hotel. Row boats were provided, and the party spent the early part of the day boating down the Sweetwater river, a stream remarkable for its variety of forest beauty. At dinner hour the Club landed at Factory Shoals, a point memorable in history from the complete destruction by Sherman, in his march, of the Manchester Manufacturing Company's cotton factory, the largest enterprise of the kind then in the South. It is now a grand pile of ruin, vine-covered and moss-padded, with forest trees of heavy growth within its open walk, and situated on the rapids of this beautiful river, with its pretty woodland setting, makes a picture well worthy the visit. The Club returned to the hotel by means of mule wagons and thence by rail to Atlanta. Their collection of pictures, typical of the rural South,—also of the advanced South,—is not to be excelled, and they expect soon to have them in readiness for exchange with other Clubs.

COR. SEC. A. C. C.

THE SOCIETY OF AMATEUR PHOTOGRAPHERS OF NEW YORK.—On the evening of January 31, 1889, the society held a very interesting special meeting at its rooms 112 West Thirty-sixth street, commemorative of the birth of photography. It was intended to commemorate the termination of the first fifty years since Daguerre first gave to the public the secret of his wonderful invention, and was attended by several of the oldest and leading photographers of the city.

Shortly after eight o'clock President Canfield introduced Prof. L. H. Laudy of the Columbia College School of Mines, who explained fully all the details connected with taking a daguerreotype, exhibiting the apparatus, as used by himself not very long ago. He related how some of the valuable specimens which he exhibited were obtained, and had several frames hung upon the wall, illustrating various styles and shapes of the daguerreotype. The cheapest, he said, used to be sold, frame, case and

all, at 12½ cents each. There were also three pictures of Daguerre, and a copy of Fox Talbot's "Pencil of Nature," published in 1844, with specimen photographs framed and hung on the wall.

The last daguerreotypes were made by Pearsall of Brooklyn in 1878. At the conclusion of his remarks Mr. Beach threw on the screen in the Society's lantern a few slides which Mr. Laudy had made, showing the illustrations and title page in the first book published by Daguerre. It bore the date of 1839, and had an engraving of Daguerre on the cover.

Mr. Abram Bogardus, the veteran photographer, followed, talking of the trials and tribulations of the photographer in the first days of photography. He said many amusing things, gathered from his forty-one years under the skylight. He showed a daguerreotype of Daguerre himself, made by a Mr. Mead in Paris about 1846, which appeared to be an excellent likeness. His remarks needed to be listened to, to be fully appreciated. He advised all young photographers to try one brand of plates, and one kind of developer, and stick to them till they thoroughly mastered the art, instead of branching out on new things.

"The Amateur Photographer of Other Days," was the topic which Mr. H. J. Newton spoke upon.

The first society for the advancement of photography was composed of three persons, and was started by Mr. H. T. Anthony, about 1861. Mr. Newton was a member, and afterwards treasurer. Amateurs in the old days had to prepare their own chemicals, collodion, silver bath, etc., which meant a great deal of work, and they sometimes produced fog, and considerable of it, instead of a picture. Now it is only necessary to buy a camera, etc., make the exposure, and have somebody else do the developing and printing. He though it was not quite right. If amateurs had more work to do they would accomplish more and make valuable discoveries.

Alexander Beckers, a gray-haired, aged photographer, one who was noted for the fine quality of daguerreotypes he used to make, next read a paper on his experience in the history of the daguerreotype, which was quite entertaining and instructive. He told of how he had to pay five dollars a pound for imported hyposulphite of soda, and said that the first place for manufacturing photographic chemicals was located where the Young Men's Christian Association building now stands, corner of Twenty-third street and Fourth avenue. His first out-door views were of Highbridge before the scaffolding was taken down. There he discovered that the daguerreotype plate increased in sensitiveness during the time between preparation and exposure. He also said that this year celebrated the end of the first century since Daguerre was born, which was in 1789, making the meeting all the more valuableas a commemorative event.

At the conclusion of his remarks Mr. J. B. Gardiner was intending to speak, but owing to the lateness of the hour said the meeting would be continued at the Section of the Institute, February 20th. On motion of Mr. Beach a vote of thanks was unanimously accorded to all of the speakers, and on another motion of Mr. Duffield a congratulatory letter speaking of this meeting and the interest shown was directed to be sent to the Photographic Society of France by the Secretary. The meeting will long be remembered as one of peculiar historic interest, since so much was said and shown regarding the birth of Photography.

SYRACUSE CAMERA CLUB.—At the regular annual meeting of the Club held at the club rooms, Friday evening, January 4th, the following officers were elected for the ensuing year: Arthur P. Yates, president; Amos Padgham, vice-president; Wallace Dickson, secretary; Charles R. Jones, treasurer. Regular meetings of the club every Friday evening, club rooms, 72 South Salina Street. Secretary's address, Box 129, P. O. Correspondence solicited.

WALLACE DICKSON, Secretary.

PHOTOGRAPHERS' ASSOCIATION OF AMERICA.

FIRST annual meeting of the Executive Committee Photographers' Association of America, held at the Revere House, Boston, Mass., January 17, 1888. Present: H. McMichael, President; George H. Hastings, First Vice President; J. M. Appleton, Second Vice President; O. P. Scott, Secretary; G. M. Carlisle, Treasurer.

Meeting called to order by the President. First order of business, reading reports of Secretary and Treasurer for the year ending December 31, 1888; appointing of Auditing Committee; report of Auditing Committee.

We, the Auditing Committee, have examined the books and vouchers of Secretary and Treasurer and find them correct.

O. P. SCOTT, GEO. H. HASTINGS, J. M. APPLETON,

Committee.

Reports of Secretary and Treasurer were received and Committee discharged. W. I. Lincoln Adams, editor *Photographic Times*, was appointed a committee on the progress of Photography.

AWARDS.—Resolved, That the Association award as a grand prize, a bronze figure, valued at \$200, and governed by the following rules and regulations:

Competitors for this award shall exhibit three plain photographs; subject, Long-fellow's poem "Evangeline," size not less than thirteen nor larger than twenty-two inches in length.

Pictures to be tastily framed, either with or without glass, and the award is to be made for the most meritorious collection.

CLASS A.—Four gold medals for the four best exhibits in genre photography, or general photographs. Competitors for this class shall exhibit six photographs, subjects to be chosen by the photographer, and appropriately inscribed. Size not less than thirteen nor more than twenty-two inches in length, and tastefully framed, with or without glass, and the award to be made for the best four collections.

CLASS B.—One gold, three silver and three bronze medals for best collection of portrait photography, in all sizes from cabinet to 20 and 24 inclusive, and as above tastily arranged.

CLASS C.—One gold, one silver and one bronze medal for best collections of landscape photography, one silver medal for best collection of marine views, and one silver medal for best collection of architectural views.

CLASS D.—One silver and one bronze medal for the six most artistically retouched negatives, any size; prints to be exhibited with negatives before and after retouching.

CLASS E.—One silver medal for the best six plain enlargements, either in silver, carbon, bromide or platinum, size not less than 18 by 22 inches.

CLASS F.—One silver medal for the best substitute for glass for negatives, and one bronze medal for the best and latest improvement in photographic appliances.

CLASS G.—One gold and one silver medal for the best foreign exhibits of portrait photography.

Competitors in all classes except Class "G" must be members residing in the United States or Canada.

Competitors in Class "A" cannot enter in Class "B," but all can compete for the grand prize.

CHOOSING JUDGES.—The President will name a chairman from competitors of each class, who shall call a meeting of those competing, who shall select three judges for each class.

A competitor in any class shall have one vote, except members of the Executive Committee, who shall not be eligible to vote in any class.

RULES GOVERNING JUDGES.—Each judge must examine exhibits separate from the others, and hand in a sealed report of his marking to the Executive Committee, who shall open them in the presence of the judges, and the Secretary take each report and determine the winners.

Should any person or persons use their influence in any way, directly or indirectly, with the judges during their term of office, in favor of any exhibit, it shall be the duty of the judges to strike said exhibit from the list of competitors.

The following principal points must be considered; first, lighting; second, posing; third, chemical effects; fourth, general effects or finish. Ten points to be the highest award in any one branch, consequently forty points is the most that can be given to any one picture.

The exhibition of photographs connected with our convention to be considered an art exhibition, pure and simple, and in order not to detract from this standard, no sign of any description shall be allowed in the hall devoted to the display of photographs, except the name and address of exhibitor.

Each picture or set of pictures must be marked with a letter signifying the class in which it competes.

All exhibits must remain on exhibition until Saturday the 10th.

One diploma will be awarded for the most tastefully arranged exhibit.

H. McMichael was made a committee on medals, members' badges, and issue of souvenirs.

G. M. Carlisle and George H. Hastings committee on hotels.

G. M. Carlisle committee to secure stenographer.

All photographs competing must be from negatives made since the last Ninth Annual Convention held at Minneapolis, July 14th, 1888.

The Tenth Annual Convention will be held at Mechanic's Hall, Boston, Mass., August 6th to 9th, 1889, inclusive.

The art and merchants' department will be closed each day from 10 A. M. to 12, to secure a large attendance at the meetings.

The art department will be open to the public Thursday evening, Friday, and Friday evening. Admission, 25 cents.

The first and second Vice-Presidents were appointed a committee to have charge of art exhibits.

Manufacturers and merchants were made a committee on railroads.

G. M. Carlisle and George H. Hastings a committee on exhibition hall accommodations.

On the evening of the first day of the convention, Edward L. Wilson will give an illustrated lecture on art principles useful in photography, to be followed by discussions.

On the second and third day, evening sessions will be held for the purpose of reading papers and discussions on same.

One of the special features of the convention will be a clam bake at Nantasket Beach, where the entire party will have a semi-Centennial group made by Hastings, of Boston.

PROGRAMME.

FIRST DAY.—1, address of welcome; 2, calling meeting to order; 3, roll call; 4, reading minutes of last meeting; 5, report of standing and special committees; 6, selection of location; 7, appointment of committee on nominations; 8, committee on awards; 9, President's annual report.

SECOND DAY.—1, reading of communications; 2, unfinished business; 3, report of committee on nominations; 4, report of special committees: 5, new business.

THIRD DAY.—1, reading of communications; 2, unfinished business; 3, new business; 4, election of officers.

FOURTH DAY.—1, reading communications; 2, report of committees; 3, unfinished business; 4, new business; 5, announcing awards; 6, closing ceremonies.

In the January issue of the American Journal of Photography, Mr. Bartlett gives an unusually rich store of good reading matter, fifty-one pages being provided. When one calls to mind what the Journal was two or three years ago, the magnitude of the change Mr. Bartlett has brought about, with the co-operation of the publishers, Thomas H. McCollin & Co., will be appreciated. The embellishment to this number consists of an excellent Ives process print of a figure study by the editor, entitled, "Twenty Days to Whitsuntide," and the table of contents includes a practical paper by Dr. Wallace caricaturing (with illustrations) some common defects in photographs; W. Willis's valuable paper upon the cold bath platino-type process; a lecture upon "The Making of Dry-plate Emulsions," read by E. H. Lyon before the Boston Camera Club, and A. Fisher's paper on "Composition in Art*and its Application to Photography."—Philadelphia Public Ledger.



LITERARY AND BUSINESS NOTES.

A PHOTOGRAPHIC EXHIBITION.—An adjourned meeting of the Photographic Society of Chicago was held at No. 96 State street, January 17. Professor Hough presided and C. Gentile acted as Secretary.

The following officers were elected for the ensuing year: President Judge J. B. Bradwell; First Vice President, Professor G. W. Hough; Second Vice President, C. F. Charles; Executive Committee, M. J. Steffens, George Kleine, and Frank Place; Treasurer, G. A. Douglas; Secretary, C. Gentile.

There was a long discussion affecting the proposed holding of an annual exhibition. It was agreed to hold such an exhibition here some time during the month of April. The exact time could not be agreed upon, as that depends largely upon the number of pictures that will be received and the hall in which they will be placed. An offer was received from the management of the Art Institute, tendering the use of three upper galleries. The offer will be further considered. It was decided to make the exhibition an international affair, and to give prizes, medals, and diplomas for the best exhibits. The newly elected officers are to be the committee on exhibition. It is expected that the exhibition will be a very large affair, and that it will attract considerable attention. It was also decided to incorporate the society under the laws of the State of Illinois. There was a long discussion on the merits of magnesium flash light, also on the merits of different developers, especially that of the new one, hydroquinone.-Chicago Daily Inter-Ocean.

WE are glad to learn that the medal of superiority was awarded by the American Institute, at the fair held in New York City, October 8 to December 15, to the Aeme Burnisher Co. of Syracuse, N. Y.

This is the highest award given by the Institute, and is evidence of the superiority of this burnisher.

It is undoubtedly the most effective, and, at the same itime, simplest in mechanism of any instrument made, and certainly deserves the high commendation it received. THE BOSTON CAMERA CLUB, 50 Bromfield Street. Office of the Treasurer, William Garrison Reed, 25 Kilby Street,

BOSTON, February 4, 1889.

MR. JOHN BARTLETT, Editor :-

Dear Sir: "Illustrated Boston" will start on its travels March 1, visiting first Chicago and San Francisco; then such Societies as wish to borrow.

Application for its use should be sent to Edward F. Wilder, Secretary, 50 Bromfield Street, Boston. Respectfully,

WM. G. REED.

The circular accompanying the above letter explains what is meant by "Illustrated Boston":

" Illustrated Boston."-Since amateur photography has taken such a deep hold all over the world, and in all the larger cities its votaries have banded together into clubs for improvement. there has sprung up a custom of exchange of work among them. In place of the general result, oftentimes scattering, of this interchange of slides, it was thought proper to centralize this interest, and do that which should bear with it a settled plan for some definite result. During the last year the members of the Boston Camera Club have prepared a series of lantern-slide pictures to illustrate its own city, in the hope that other similar organizations would follow its example; and the result is given in this Illustrated Description of Boston.

Later in the season will be given "Illustrated Chicago," by members of the Chicago Lantern Slide Club, and "Glimpses of California," by members of the Pacific Coast Amateur Photographers' Association.

The members of the Boston Camera Club intend to prepare, during the coming season, an illustrated description of the White Mountain region of New Hampshire. We hope that other Societies will follow the example of the enterprising Boston Society and prepare like entertainments. The circular sent us is accompanied with complimentary tickets for the exhibition at Chickering Hall, February 13.



INTERNATIONAL PHOTOGRAPHIC FESTIVAL AND EXHIBITION.

In Commemoration of the Fiftieth Anniversary of the Discovery of the Photographic Negative.

THE first Photographic Negative was taken in the year 1839, and was made known by Mr. Fox Talbot in a communication to the Royal Society in that year.

In commemoration of that important event, it has been arranged to hold—in conjunction with the Annual Exhibition at the Crystal Palace—a combined meeting of the Photographic Societies and Clubs of the world, when addresses will be delivered relative to the history and progress of the Art during the fifty years that have since elapsed.

It is intended, if the idea can be successfully carried out, that the several Societies and Clubs shall be grouped on the Handel Festival Orchestra, and that a photograph, which would doubtless become historical, shall be taken of the assembly.

The Festival and Exhibition will ultimately be brought to a close with a Grand Conversazione in the Palace.

As upon the former occasion, the Exhibition will be divided into "Apparatus" and "Art" Divisions, but instead of confining it to the Grand Central Nave the side Courts will also be utilized, in which the light will be more favorable for the inspection of pictures than was the case under the lofty glass roof.

Steps are being taken to bring the Exhibition to the notice of American, Colonial, and Continental Photographers and Manufacturers, with a view to its being of a thoroughly International character.

Lantern Entertainments will be provided during the Exhibition, the light being thrown upon the thirty-foot screen from a distance of a hundred feet; there will also be a competition of Lantern Slides.

With a view to simplify and render more accurate the process and result of Judging in the Apparatus Division, Exhibitors will be asked to give, upon their Application Form, a list of the articles desired to be judged as possessing novel or exceptional merit, and the Jurors' attention will be confined to the goods so entered; a system of awards will thus be adopted which may be denominated as "Commendation without Competition;" in other words, an article or picture will receive the Judges' Award, not because it is superior to some other exhibit more or less like it, but on account of its own intrinsic merit.

The Entry Form for pictures will contain a column in which the Exhibitor may quote the price for sale; but all sales must be effected through the Official Sales Office, which will be open daily in the centre of the Exhibition, and a commission of ten per cent. will be deducted from the amount received. The price of each picture (when stated by the Exhibitor) will be published in the Catalogue.

A Certificate of H. M. Board of Trade has been applied for, granting protection to all new and unpatented inventions, as provided by the Patent Designs and Trade Marks Act, 1883.

Application for Entry Forms, and for Forms of Applications for Space in the Apparatus Division, and all inquiries connected with the Festival and Exhibition, should be addressed to Messrs. S. G. Buchanan Wollaston and John Francis Peasgood, at the Crystal Palace, S.E.

HENSHAW RUSSELL, Manager.

SCHEDULE OF CLASSES.—ART DIVISION.

CLASS A.—Out-door Photography.—Section 1. Pure Landscapes. Section 2. Landscape with Figures. Section 3. Architecture (Exterior and Interior). Section 4. Interior Pictures other than Architectural. Section 5. Instantaneous Photography, including Marine Subjects. Section 6. Groups.

CLASS B.—In-door Photography.—Section 1.
Direct Portraiture. Section 2. Home Portraiture. Section 3. Enlargements. Section 4.
Groups.

CLASS C.—General.—Section 1. Genre Subjects. Section 2. Still life. Section 3. Photomicrographs. Section 4. Combination Pictures. Section 5. Platinotypes. Section 6. Ceramic and Colored Photographs on Opal and China. Section 7. Photo-mechanical Pictures.

CLASS D.—Transparencies.—Section 1. Photographic Transparencies for Decorative Purposes. Section 2.—Photographic Lantern Slides.

CLASS E.—Stereoscopic Photography.—Section

1. Stereoscopic Slides, Paper. Section 2.

Stereoscopic Slides, Glass.

A Special Award for the best Picture in any Class taken by a Lady Amateur.

APPARATUS DIVISION.

CLASS A.—Woodwork, Etc.—Section 1. Cameras and Fittings, including Hand Cameras.

Section 2. Tripods and Studio Stands. Section 3. Studio Furniture, including all accessories.

CLASS B.—Optical, Etc.—*Section 1. Lenses. Section 2. Best Series of Lenses (not less than five), fitting one flange, and cut to the standards of the Photographic Society of Great Britain. Section 3. Instantaneous and Time Shutters. Section 4. Finders and View Meters. Section 5. Enlarging Apparatus. Section 6. Lanterns. Section 7. Appliances for Artificial Illumination. Section 8. Stereoscopes.

CLASS C .- Cheap and Popular Sets.

*CLASS D .- Dry Plates and Films.

CLASS E.—Surrounds. Section 1. Mounts, Section 2. Frames Specially Suitable for Photographs. Section 3. Mouldings for Photographic Frames. Section 4. Albums and Cases.

CLASS F .- General Appliances and Plants.

CLASS G .- Cycles fitted for Photographic Pur-

*There will be no Awards in this Class (D), nor in Class B, Section 1.

LANTERN DIVISION.

Information respecting the Lantern Entertainments, which will take place during the Exhibition may be obtained on application to MESSRS. S. G. BUCHANAN WOLLASTON, AND J. F. PEASGOOD.

NOTICE TO AMERICAN EXHIBITORS,-With a view to obviate the difficulties in connection with the Customs, it has been decided, so far as AMERICAN EXHIBITORS are concerned, to relax the rule which requires that all pictures shall be framed. Prints by American artists may therefore be sent per mail, and the Executive will, at their own expense, have the same mounted and displayed upon special screens reserved for that purpose; the only condition being that they shall not be called upon to return the same. Pictures so sent will be equally eligible with others for Awards, unless instructions are received from the Exhibitors to the contrary. For Exhibits under this head no fee will be charged.

HENSHAW RUSSELL, Manager.



	· O. · · · Nonetine Day
	1—8x10 Negative Box,
FEBRUARY BARGAIN LIST.	1-6½x8½ " " 50
	1-15 inch Smith & Pattison, Qua-
Accessories:	druplex Enameler, 25 00
1—Perfect Camera Stand for	Camera Boxes:
8x10 8 00	1-5x8 Blair View Camera, single
ı—Iron Centre Camera Stand, . 3 00	swing 17 00
	1—Climax Outfit, including chemi-
1—14-in Eureka Burnisher 16 00 1—20-in Entrekin Eureka Bur-	cals, complete 3 50
	1—17x20 D. S. Portrait Camera,
nisher 30 00 1—Seavey Swiss Cottage Acces-	good condition 40 00
sory 12 00	1—4¼ x6½ Novalette Camera . 16 00
1—8x10 Exterior Ground, good	1—8x10 American Optical Co.'s
condition, 10 00	Royal Camera, double swing
2—Spencer Head-rests II oo	and carriage movement, . 25 00
British Journal Almanacs for 1878 20	1—8x10 Ferrotype Box, Carriage
Photo Mosaics for 1883, 20	movement and glass cornered
1—8x10 Plain painted ground . 3 00	holder and 4x4 lens 30 00
ı—Knickerbocker stand, with	1—5x8 Tourist Outfit, including
14x17 top 9 00	5x8 Tourist Camera Box, 2
18x10 Osborne's interior back-	Daisy Plate Holders, I Exten-
ground, new, light left 20 00	sion Tripod, and I Canvas
1—4x8 Osborne's side slip 7 50	Carrying Case, very little used.
Pearl leads, the best retouching	Price, new, \$40.50, will sell
point in the market, each . 15	for 30 00
PER DOZ.	1—10x12 Cone View Camera,
5x8 Woodbury Dry Plates 80	Double Swing, new 52 80
	1—4x5 Flammang revolving back
5x7 " 77 4¼x6½ " " 65	Camera, new, 25 00
6½ x8½ Triumph " 85	1-41/4 x 5 1/2 No. 202 A. Scovill
5x7 " " 55	Outfit 20 50
4¼x6½ " " 45	1-6½x8½ View Camera and
5x8 Neidhardt " 65	Lens 12 00 1—5x8 Wet Plate Stereo Camera,
4x5 Bridle " 35	
1—8x10 Hough's Exterior ground,	3 holders, case and tripod . 25 00 1-6½x8½ American Optical Co.
good as new, light left of sit-	first qual. View Camera 23 00
ter 9 00	1-44x51/2 Ex. qual. Portrait
1-8x10 Hough's Exterior ground,	Camera
light right 8 oo	1—5x8 American Optical Co.
I—Hough's Oak Stump 7 50	Stereo Camera , 25 00
1—Osborne's No. 71 Rock Acces-	1-5x8 Scovill Camera, Lens,
sory 9 00	holder, tripod and case 8 00
1—Osborne's Bridge Accessory . 8 00	1-5x8 Blair Compact Camera,
I-Osborne's Gate Combination	good as new 35 00
Accessory, new 18 00	4-5x8 Feather Weight Holders,
I—5x8 Negative Box 50	each 75
I—Pneumatic Drop Shutter, fitted	1-8x10 American Optical Co.'s
for no. 2 Darlot lens 2 00	Camera, with carriage move-
24—5x8 Printing Frames, each . 30	ment, fitted with 4-1/4 tubes
6—4¼ x6½ Printing Frames, each 3—3¼ x4¼ Printing Frames, each	and 2 Bonanza Holders, 28 00
Class Dath	1—8x10 Single Swing Cincinnati
1— 8x10 " 1 25	Ferrotype Camera, 18 00
I— 9XII " 1 75	Lenses:
I-IOX12 " 3 00	1-1 Darlot Rapid Hem. Lens,
1— 7x10 Glass Bath, 1 00 1— 8x10 " 1 25 1— 9x11 " 1 75 1—10x12 " 3 00 6—6½x8½ Printing Frames, @ 40	for 4x5 views 12 00
72 72	

1-8x10 Beck Lens, good as new,	1-8x10 E. A. View Lens 5 00
fitted with Prosch Shutter . 60 00	I—Ross View Lens 5 oo
1—set ¼ Darlot Tubes 13 00	1-H. Fitz Double View Lens, re-
1—set ½ Darlot Tubes 18 00	volving stops 8 oo
1-18x22 Zentmayer Lens 40 00	1-8x10 Voigtlander Portrait Lens 80 50
1-4-4 Holmes, Booth & Hayden	1-4-4 Dallmeyer Group Lens . 50 00
Portrait Lens 25 00	1-4-4 Walzl Portrait Lens 20 00
1-1/2 size Voigtlander Portrait	1-1/4 size portrait lens 3 00
Lens 10 00	1-4-4 M. Hilb & Co. Portrait Lens 15 00
:-5x8 Waterbury Lens 2 00	I-Matched Pair Morrison wide-
1—Focusing Glass	angle view Lenses fitted with
1-11x14 Pantagraph Lens, new 38 00	Hoover Shutter 45 00
1-1/2 size Voigtlander Lens 25 00	1-4 D Dallmeyer 8x10 Portrait
1—4x5 Dallmeyer View Lens 12 00	Lens 75 00
1-1/4 size L. W. Krantz Portrait	1-1/4 size Harrison Portrait Lens 5 00
Lens 12 50	1—4x5 R. O. Co. View Lens, 1 50
1—1/4 size C.C. Harrison Portrait	I—4-4 Voigtlander Portrait Lens, 35 oo
	I—¼ size Harrison Portrait Lens, 5 00
1—½ size Darlot quick acting	9—Postage Stamp Lenses on a
Portrait Lens, central stops . 18 00	Brass Plate, 12 00
1—No. 6, 17x20 Darlot wide-angle	1—2 Darlot Rapid Hem. Lens,
Hemispherical Lens 38 00	for 5x8 views 18 oc

Every lens guaranteed. Sent on 10 days' trial on receipt of price.

THOS. H. McCollin & Co. 635 Arch Street, Phila.

ROLFE'S Retouching Compound, the best preparation for preparing negatives for the work of retouching. Price, 40 cents per bottle. For sale by

THOS. H. McCollin & Co., 635 Arch Street, Philadelphia. WANTED—A 5x7 Dallmeyer or Ross Rectilinear Lens. Will exchange for No. 1 Euroscope.

THOS. H. McCOLLIN & CO., 635 Arch St., Phila.

FOR SALE—Photograph Gallery near Philadelphia, established for one year, or will take partner with some capital to push business. Address P., care of Thos. H. McCollin & Co., 635 Arch St., Phila.

PURPLE CANE, NEB., Sept. 14th, 1888. Mr. CARBUTT.

DEAR SIR.—I have perfect success with your "Eclipse 27 plates" with "Blitz-Pulver" and your "Hydrochinone." I can ask nothing better. I shall use your plates altogether in future. I have tried three other makes, but had trouble with them all. Respectfully,

S. RUFUS MASON.

Draughtsmen's Sensitive Paper,

Unrivaled quality. Specially prepared for reproduction of Plans, Drawings, Architectural Designs, etc. Send for Price List.

THOS. H. McCOLLIN & CO.

G. HANMER CROUGHTON, ARTIST.

Enlarging and Finishing for the Trade.

16 STATE ST., ROCHESTER, N. Y.

Bromides, Platinotypes, Carbons.

The object of my engagement with the Eastman Co. having been accomplished, viz: the demonstration of the fact that artistic work could be executed with greater facility upon Bromide Paper than upon any other kind of paper used for enlarging purposes, that engagement has terminated, and I have commenced business on my own account as above, and solicit a trial order. Send for price list and circulars.

Important Announcement

TO ALL PARTIES USING PHOTOGRAPHIC PLAIN SALTED PAPERS.

That hereafter I shall prepare both Matt and Leatherized Salted Papers by an entirely new process, for keeping its primary color for several days after its being sensitized (it being excluded from light and sulphur fumes in the meantime, and the way to do this is to be placed in tin tubes made near air-tight). Among its many qualities are Toughness, a superior matt surface, having a splendid tooth for all kinds of artists' work.

Float on any ordinary silver bath, and fume from 20 to 30 minutes, or swab with ammonia nitrate of silver, made thus: to 480 grains of silver add 12 ounces of water; when dissolved, pour off one-third, to the remaining two-thirds add strong ammonia, which forms a precipitate, and still add until all the precipitate is re-dissolved, then add the remaining one-third to this, add sufficient C. P. nitric acid, drop by drop, until the residue is nearly taken up; this needs no fuming, and when dry it is ready for use, and, in my judgment, makes the best prints. If bath discolors, add a few drops of table salt solution, and sun well.

SAMPLES SENT BY MAIL, 10 CENTS. FOR SALE BY ALL DEALERS.

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